SYSTEM	SERIES	FORMATION	LITHOLOGY	MAXIMUM THICKNESS (FT)	DESCRIPTION OF ROCKS
TERTIARY	Miocene	North Park Formation		1120	Grayish-orange to light-gray calcareous ashy sandstone, volcanic-pebble conglomerate and conglomeratic sandstone, and a few beds of limestone, tuff, and volcanic ash.
		UNCONFORMITY			
	Oligocene	White River Formation		230	Light-brown to light-gray calcareous ashy claystone, siltstone, and sandstone.
		UNCONFORMITY			
	Eocene	Coalmont Formation		7000	Sandstone, conglomerate, conglomeratic sandstone, and sandy claystone; contains some carbonaceous shale and thin coal beds in lower part. Sandstone and conglomerate are light brown to light gray; claystone is light gray, green, brown, and sparsely red. Resistant sandstone beds are calcareous.
	Paleocene				
		UNCONFORMITY			
CRETACEOUS	Upper Cretaceous	Pierre Shale — Sandy member		2200	Light-brown to gray calcareous sandstone interbedded with nonresistant light-brown to dark-gray siltstone and shale; also some clay-pebble conglomerate, coal, and a few calcareous to noncalcareous siltstone concretions. Sandstone is mostly soft and nonresistant but contains a few hard ledges.
		Pierre Shale — Shaly member		3030	Shale, calcareous near base, silty to sandy in upper part; interbedded with a few siltstone and sandstone beds, and containing calcareous to noncalcareous siltstone concretions in upper part. Dark gray in lower part, except basal calcareous beds, which are brown weathering, becoming light gray to brownish gray in upper part. Entire unit nonresistant.
		Niobrara Formation — Smoky Hill Shale Member		720	Smoky Hill Shale Member is calcareous, platy shale, containing shaly limestone in upper part; dark gray in lower part, becoming light gray, brown, and yellow in upper part. Fort Hays Limestone Member is interbedded light-gray limestone and dark calcareous shale.
		Niobrara Formation — Fort Hays Limestone Member		650	Codell Sandstone Member is interbedded resistant ridge-forming brown sandy limestone, calcareous sandstone, and dark shale; 35 to 65 ft thick. Upper part of middle shaly member is calcareous platy dark-gray, brown-weathering shale. Limestone in the middle shaly member is interbedded light-brown clastic limestone and calcareous shale; 5½ ft thick. Lower part of middle shaly member is soft dark noncalcareous shale becoming calcareous near top; contains minor bentonite beds and conspicuous bluish ironstone concretions. Mowry Shale Member is predominantly dark, light-gray weathering brittle platy shale, and beds of shaly siltstone and bentonitic shale; 95 to 135 ft thick.
		UNCONFORMITY			
		Benton Shale — Codell Sandstone Member			
		Benton Shale — Middle shaly member			
		Benton Shale — Mowry Shale Member		235	Upper part (South Platte equivalent) is brown to gray sandstone and dark-gray shale and siltstone; 80 to 130 ft thick. Lower part (Lytle equivalent) gray to brown conglomerate and conglomeratic sandstone and some light-gray to green or red claystone or siltstone; 60 to 125 ft thick. Both parts are commonly resistant, ridge forming.
	Lower Cretaceous	Dakota Sandstone — Upper part			
		UNCONFORMITY			
JURASSIC	Upper Jurassic	Morrison Formation — Lower part		430	Upper part is gray to greenish-gray claystone and calcareous siltstone, containing some lenticular limestone near top. Lower part is interbedded red, green, and gray claystone and calcareous siltstone, and lenticular brown calcareous sandstone; contains a discontinuous but persistent thin limestone bed at base.
		Sundance Formation — Upper member		150	Upper member is light-gray to green calcareous glauconitic shale and sandstone; 30 to 45 ft thick. Lower member is nonresistant, fine-grained, light-gray sandstone; slightly calcareous where cemented; 70 to 120 ft thick.
		UNCONFORMITY			
TRIASSIC		Sundance Formation — Lower member; Chugwater Formation		860	Interbedded red shale, siltstone, and sandstone; coarser beds are calcareous; contains a thin limestone bed in the basal 10 ft in the northern part of the area. Conglomerate and conglomeratic sandstone at top.
PERMIAN					
		UNCONFORMITY			
PRECAMBRIAN					Older metamorphic rocks, chiefly gneiss; and younger intrusive granitic rocks, chiefly quartz monzonite.

GENERALIZED SECTION OF PRE-QUATERNARY ROCKS EXPOSED IN NORTHWESTERN NORTH PARK, COLORADO

745-100 O - 65 (In pocket)